

IN THE CLAIMS:

The following claims will replace all prior versions of claims in this application.

1-3. (Cancelled)

4. (Currently Amended) A method for separation of chemical substances and/or particles, comprising the step of: applying an electric field to a microfluid system consisting of a plurality of adjoining liquid ~~or gel~~ lamellae lamellae of two or more different phases, perpendicular to the phase boundaries, wherein the individual phases are parallel arranged liquid or gel lamellae of a thickness in the submillimeter range or smaller.

5-11. (Cancelled)

12. (Previously Presented) The method according to claim 4, wherein different concentrations of a substance having a given physicochemical affinity for the substances or particles or a combination thereof being separated are adjusted in the phases.

13-19. (Cancelled)

20. (New) The method according to claim 4, wherein the method further includes using a microfluid chamber, and

introducing the lamellae into intake channels of the microfluid chamber, the microfluid chamber having an electrode pair arranged thereon such that the electric field is generated perpendicular to the phase boundaries, and

flowing the lamellae through the microfluid chamber while the electric field is applied.

21. (New) A method for separation of chemical substances and/or particles, comprising the steps of:

obtaining a device having intake channels connected to a microfluid chamber, the microfluid chamber having an electrode pair arranged thereon for applying an electric field;

providing a microfluid system consisting of a plurality of liquid lamellae of two or more different phases;

flowing the liquid lamellae through the microfluid chamber such that sheets of the lamellae run parallel and abut against each other and form common phase boundaries; and

applying an electric field perpendicular to the phase boundaries utilizing the electrode pair.

22 (New) The method according to claim 20, wherein different concentrations of a substance having a given physicochemical affinity for the substances or particles or a combination thereof being separated are adjusted in the phases.